

Family Health DataLine

IN THIS ISSUE:

- During 1991-94, less than 25% of adult Alaskans ate the recommended five servings of fruits and vegetables per day.
- Among Alaskans, only 30% could identify 5 or more daily servings of fruits and vegetables as being necessary for good health.
- Primary factors influencing fruit and vegetable consumption include taste, quality, availability, and price.
- Results suggest that simple methods exist to increase fruit and vegetable consumption, including eating them for snacks and adding them to other foods such as casseroles and stews.

Fruit and Vegetable Consumption Among Adults in Alaska

Introduction

Consumption of fruits and vegetables may reduce the risk of chronic diseases including some types of cancer¹, coronary heart disease², and stroke³. Because of these findings, most popular and scientific nutrition literature consistently recommends increasing personal consumption of fruits and vegetables. In addition, national and state public health agencies have made the recommendation to eat more fruits and vegetables one of the primary health objectives for the year 2000^{4,5}, and the 1995 edition of the Dietary Guidelines for Americans moved the recommendation to choose a diet with plenty of grain products, vegetables and fruits from fourth place to third emphasizing these foods as a basis for a healthful diet⁶. Despite the importance of this nutritional advice, many adults in the United States do not eat the appropriate daily servings of fruits and vegetables^{7,8}.

The National Cancer Institute and Produce for Better Health Foundation developed the *5 A Day for Better Health Program* to promote consumption of at least five daily servings of fruits and vegetables. This initiative represents the largest public-private nutrition education program launched to date in the United States. The primary public health objective of the program - as supported by the Dietary Guidelines for Americans and its companion publication, the Food Guide Pyramid^{6,9} - is to increase the proportion of persons two years of age and older in the United States who eat a *minimum* of five servings of fruits and vegetables each day. If followed, this recommendation helps ensure that persons will eat sufficient quantities of essential vitamins and minerals as part of the overall diet plan suggested by the Dietary Guidelines².

Methods

To better design public health programs aimed at implementing *5 A Day for Better Health* in Alaska, we attempted to determine attitudes and practices regarding consumption of fruits and vegetables among Alaska residents. Data came from three sources: the Behavioral Risk Factor Surveillance System (BRFSS), focus groups, and a random sample telephone survey of adults.

Behavioral Risk Factor Surveillance System

The Behavioral Risk Factor Surveillance System gathers information about the lifestyle and health habits of adults aged 18 and older. Data is collected monthly via a random telephone survey and compiled annually for a yearly sample size of 1536. The Alaska sample is stratified into four regions. Data are analyzed and prevalence estimates are reported that represent the state population. The data are used to help plan and evaluate health promotion, disease prevention programs and monitor progress towards the National Year 2000 Health Objectives. Information on fruit and

vegetable consumption was collected in Alaska during 1991, 1992 and 1994.

Focus groups

Focus groups attempt to explore attitudes, beliefs, and feelings about a subject and consequently they provide qualitative rather than quantitative data. The Alaska Division of Public Health (ADPH) coordinated 11 focus groups on the topic of fruit and vegetable consumption in seven urban Alaskan communities during March and April 1995. Six focus groups included predominantly Alaska Natives and five included only non-Alaska Natives. A total of 64 people participated, 29 Alaska Natives and 35 non-Alaska Natives. Participants were the primary food shopper or preparer for their family, cared for at least one child 2-15 years of age, had a high school diploma or equivalent, and had no special training in nutrition or therapeutic diets. Focus group leaders asked participants the major influences on their fruit and vegetable selection and use, and the number of fruit and vegetable servings they considered necessary for good health, and ways to eat more.

Telephone survey

ADPH performed a statewide random sample telephone survey of 510 adults, aged 18 and over, in 64 communities during August 1995. As part of the survey, interviewers asked respondents the number of daily fruit and vegetable servings they considered necessary for good health.

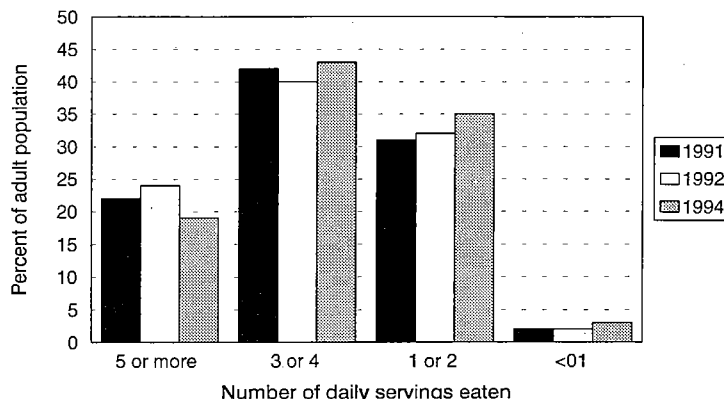
Results

Level of Fruit and Vegetable Consumption

The majority of Alaskan adults did not eat the minimum recommendation of five daily servings of fruits and vegetables (Figure 1). During 1991, 1992, and 1994 results from BRFSS indicated that the greatest segment of the adult population in Alaska ate three to four daily servings of fruits and vegetables while approximately one fourth reported eating fruits or vegetables five or more times per day, and over one third reported eating

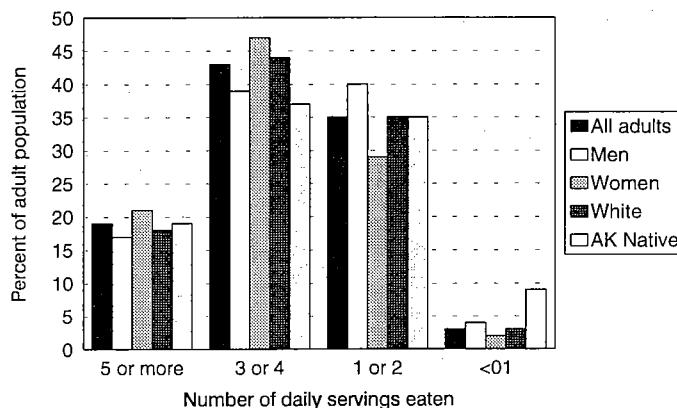
between two and no servings each day. During 1994, less than 25% of persons reported eating five or more servings of fruits and vegetables per day regardless of race or gender (Figure 2); however, results indicated more women ate five or more daily servings of fruits and vegetables than men and men reported eating two or fewer daily servings more than women (Figure 2).

Figure 1. Reported number of daily fruit and vegetable servings eaten by adults age 18 years and older from the BRFSS* survey by year; Alaska 1991, 1992, and 1994.



*Behavioral risk factor surveillance system

Figure 2. The reported number of daily fruit and vegetable servings eaten by adults age 18 years and older from the BRFSS* survey, by race and gender; Alaska, 1994.



*Behavioral risk factor surveillance system

The largest change of fruit and vegetable consumption among different demographic groups during the years 1991 through 1994 occurred among males. During 1991, 35% of males ate two or fewer servings of fruits and vegetables compared to 39% during 1992 and 45% during 1994.

Awareness About the Number of Recommended Daily Servings of Fruits and Vegetables

Group leaders asked focus group participants "How many servings of fruits and vegetables do you think you should eat each day?" Participants throughout the state more frequently identified a number less than five than five or more. This finding indicates that lack of knowledge may be a factor influencing the low intake of fruits and vegetables among some adults in the state.

During the telephone interview, interviewers asked respondents "How many servings of fruits and vegetables do you think a person should eat each day for good health?" Most respondents said a number between one and four (Table 1). Forty percent of respondents thought a person should eat either three or four

servings of fruits and vegetables for good health. This corresponds with the percentage of the population consuming that number of servings according to the most recent BRFSS data. Compared to men, women more frequently identified five or more servings of fruits and vegetables as being required for good health.

Table 1. The number of daily fruit and vegetable servings believed necessary for good health by persons 18 years of age and over answering a random statewide telephone survey; Alaska, 1995.

Group	Number of servings						Unsure
	1	2	3	4	5	>5	
Total	8%	20%	20%	15%	20%	10%	6%
Men	12%	27%	21%	10%	13%	7%	10%
Women	4%	14%	19%	20%	27%	15%	3%

Influences on Fruit and Vegetable Consumption

Focus group results indicate that for people throughout the state, taste preferences, availability of produce in the store and in the home, and price are the primary factors influencing *how often* they eat fruits and vegetables. Additionally, for many Alaskans, quality of produce, price, family and personal taste preferences, along with consideration of other foods being prepared for meals influence the *types* of fruits and vegetables they use. Non-Alaska Natives, but not Alaska Natives, identified the state of preparation (for example, whether or not carrots needed to be peeled and cut) and time required for preparation as a leading influence on consumption patterns. Alaska Native groups throughout the state, but not non-Alaska Natives, identified cravings as a major influence on how often they ate fruits and vegetables.

Suggested Ways to Eat More Fruits and Vegetables

Focus groups suggested several ways of increasing fruit and vegetable consumption including eating them for snacks, storing them already cut up inside the refrigerator for meal preparation or consumption raw, and adding fruits and vegetables to other foods such as casseroles, soups, stews, meatloaf, cakes, and jello. Non-Alaska Natives were more likely than Natives to suggest buying pre-prepared produce (already peeled and cut) for easy consumption.

Focus group participants felt that children were an important group to reach with the message to eat more fruits and vegetables. Participants indicated their children's likes and dislikes influenced the types of fruits and vegetables that they chose to serve in their households. Participants also suggested frequently involving children at an early age in the selection and preparation of fruits and vegetables as a way to encourage children to eat more.

Discussion

Cancer ranked first as a cause of death among both men and women and Alaska Natives and Whites in Alaska during 1993 (10). Research indicates that 35% of all cancers may be prevented by modifying dietary intake (11). Applying this percentage to 1993 vital statistics data in Alaska, approximately 198 of the 565 cancer deaths may have been preventable by improving diet. More specifically, recent research suggests that consumption of fruits and vegetables reduces the risk for cancers of the gastrointestinal and respiratory tracts (1). Furthermore, consuming a diet rich with fruits and vegetables may also reduce the risk for heart disease, hypertension, and stroke (2), as well as reduce the incidence of other conditions such as constipation and diverticulosis, and decrease serum

lipid levels (12). Finally, and equally important, people report feeling better when they eat more fruits and vegetables (13).

The data we have on fruit and vegetable consumption among Alaskan adults indicates that they do not eat the *minimum* recommendations for daily servings of fruits and vegetables. Information from focus groups and telephone surveys suggests one explanation for this result is that most adults do not know the quantity of fruits and vegetables they should eat.

Our findings in Alaska indicate:

- That the potential exists to increase awareness regarding the recommendation to eat at least five daily servings of fruits and vegetables and the health benefits associated with following this recommendation.
- That low fruit and vegetable consumption may occur because of a lack of knowledge regarding how much individuals should eat.
- That Alaskans feel nutrition education should begin during childhood.
- That there exists a desire for easy ways to prepare fruits and vegetables that taste good.
- That males may represent an important target group for intervention based on their negative trend for fruit and vegetable consumption during the period 1991-94.

To respond to these findings, the Alaska Division of Public Health, Section of Maternal, Child, and Family Health has worked to develop and implement an awareness campaign to promote increased consumption of fruits and vegetables statewide. Components of this program include public service announcements for radio and television; distribution of *5 A Day for Better Health* brochures and recipes through public presentations, Women, Infant, and Children

(WIC) sponsored programs, health care providers, worksite wellness programs, and health fairs; implementation of *5 A Day for Better Health* activities in schools; and development of guidelines for the selection, care and handling of fruits and vegetables and distribution of these guidelines to the public. Much of this work has been done through collaboration with the Eat Smart Alaska coalition, a public-private partnership of individuals and organizations working to promote healthful food consumption patterns among Alaskans.

As part of the commitment by ADPH to improve the health of Alaskans, the Section of Maternal, Child and Family Health will continue to monitor fruit and vegetable consumption among Alaskans as well as continue with efforts to promote consumption of these foods statewide. If such promotion efforts are successful, we anticipate a potential decrease in the rate of cancer and other illnesses for the long term, as well as an improved general well-being among Alaskans

for the short term.

Submitted by: Sandy Burnham, RD, MPH

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